Claims

What is claimed is:

1. A method of managing message arrival at a receiver of a communications environment, said method comprising:

   determining whether a message received by the receiver is in sequence order, said determining using a sequence number of the message; and

   attempting to match the message with a posted receive, in response to the determining indicating that the message is in sequence order.

2. The method of claim 1, wherein the attempting comprises comparing one or more attributes of the message with one or more attributes of an entry of a posted receive data structure.

3. The method of claim 1, further comprising processing the message, in response to a match between the message and the posted receive.

4. The method of claim 3, further comprising:

   determining whether an earlier message that was previously out of sequence is now in sequence, in response to the processing; and

   performing one or more tasks associated with the earlier message, in response to the determining indicating that the earlier message is now in sequence.

5. The method of claim 4, wherein the performing comprises:

determining whether there is a posted receive for the earlier message; and

processing the earlier message, in response to the determining indicating that there is a posted received.

6. The method of claim 5, further comprising removing the earlier message from an out of order data structure, in response to the determining indicating that there is no posted receive.

7. The method of claim 1, further comprising linking the message to an early arrival data structure, in response to a failed attempt to match.

8. The method of claim 1, further comprising linking the message to an early arrival data structure and an out of order data structure, and placing the message in an unmatched messages buffer, in response to the message not being in sequence order.

9. A system of managing message arrival at a receiver of a communications environment, said system comprising:

means for determining whether a message received by the receiver is in sequence order, said means for determining using a sequence number of the message; and

means for attempting to match the message with a posted receive, in response to the determining indicating that the message is in sequence order.

10. The system of claim 9, wherein the means for attempting comprises means for comparing one or more attributes of the message with one or more attributes of an entry of a posted receive data structure.

11. The system of claim 9, further comprising means for processing the message, in response to a match between the message and the posted receive.

12. The system of claim 11, further comprising:

means for determining whether an earlier message that was previously out of sequence is now in sequence, in response to the processing; and

means for performing one or more tasks associated with the earlier message, in response to the determining indicating that the earlier message is now in sequence.

13. The system of claim 12, wherein the means for performing comprises:

means for determining whether there is a posted receive for the earlier message; and

means for processing the earlier message, in response to the determining indicating that there is a posted received.

14. The system of claim 13, further comprising means for removing the earlier message from an out of order data structure, in response to the determining indicating that there is no posted receive.

15. The system of claim 9, further comprising means for linking the message to an early arrival data structure, in response to a failed attempt to match.

16. The system of claim 9, further comprising means for linking the message to an early arrival data structure and an out of order data structure, and placing the message in an unmatched messages buffer, in response to the message not being in sequence order.

17. An article of manufacture comprising:

at least one computer usable medium having computer readable program code logic to manage message arrival at a receiver of a communications environment, the computer readable program code logic comprising:

determine logic to determine whether a message received by the receiver is in sequence order, the determining using a sequence number of the message; and

attempt logic to attempt to match the message with a posted receive, in response to the determining indicating that the message is in sequence order.

18. The article of manufacture of claim 17, further comprising:

process logic to process the message, in response to a match between the message and the posted receive;

determine logic to determine whether an earlier message that was previously out of sequence is now in sequence, in response to the processing; and

perform logic to perform one or more tasks associated with the earlier message, in response to the determining indicating that the earlier message is now in sequence.

19. The article of manufacture of claim 18, wherein the perform logic comprises:

determine logic to determine whether there is a posted receive for the earlier message; and

process logic to process the earlier message, in response to the determining indicating that there is a posted received.

20. The article of manufacture of claim 17, further comprising link logic to link the message to an early arrival data structure and an out of order data structure, and place logic to place the message in an unmatched messages buffer, in response to the message not being in sequence order.

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